


# **Soil and Groundwater Management Contingency Plan**

**Former Tosco/Unocal Bulk Terminal #0201  
Eureka, California  
Case No. 1THU463**

Prepared for:

**CBE, LLC**

 **Consulting Engineers & Geologists, Inc.**

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812 W. Wabash  
Eureka, CA 95501-2138  
707/441-8855

March 2006  
098179.306



**CONSULTING ENGINEERS & GEOLOGISTS, INC.**

812 W. Wabash • Eureka, CA 95501-2138 • 707-441-8855 • Fax 707-441-8877 • info@shn-eureka.com

Reference: 098179.306

March 10, 2006

Ms. Kasey Ashley  
California Regional Water Quality Control Board  
North Coast Region  
5550 Skylane Boulevard, Suite A  
Santa Rosa, CA 95403

**Subject: Soil and Groundwater Management Contingency Plan, Former  
Tosco/Unocal Bulk Terminal #0201, Eureka, California, Site ID #1THU463**

Dear Ms. Ashley:

On behalf of CBE, LLC, SHN Consulting Engineers & Geologists, Inc. has prepared this Soil and Groundwater Management Contingency Plan (SGMCP) for the Former Tosco/Unocal Bulk Terminal #0201 site, which is located at 1200 Railroad Avenue in Eureka, California. This SGMCP has been developed to provide guidance for future demolition and development work conducted at the site.

If you have any questions, please contact me at (707) 441-8855.

Sincerely,

**SHN Consulting Engineers & Geologists, Inc.**

A handwritten signature in black ink, appearing to read 'Mike Foget', is written over the typed name.

Mike Foget, P.E.  
Project Manager

MKF/JLL:med

Enclosure: Report

copy w/encl: HCDEH  
Gary Gunderson, CBE, LLC

Reference: 098179.306

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**Former Tosco/Unocal Bulk Terminal #0201  
Eureka, California  
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Prepared by:



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812 W. Wabash  
Eureka, CA 95501-2138  
707/441-8855

March 2006



QA/QC:FBL\_\_

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## Abbreviations and Acronyms

<	denotes a value less than the method detection limit
>	denotes a value greater than the number listed
mm Hg	millimeters of Mercury
mg/m <sup>3</sup>	milligrams per cubic meter
ppm	parts per million
µg/g	micrograms per gram
ACGIH	American Conference of Governmental Industrial Hygienists
AST	Aboveground Storage Tanks
BTEX	Benzene, Toluene, Ethylbenzene, and total Xylenes
Cal/OSHA	California Division of Occupational Safety and Health
EPA	(U.S.) Environmental Protection Agency
EW-#	Extraction Well-#
FID	Flame Ionization Detector
HC	Hydrocarbons
HEPA	High-Efficiency Particulate Air
HVOCs	Halogenated Volatile Organic Compounds
IH	Industrial Hygienist
LEL	Lower Explosive Limit
MTBE	Methyl Tertiary-Butyl Ether
MW-#	Monitoring Well-#
NA	Not Applicable
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
OSHA	(U.S.) Occupational Safety and Health Administration
PCE	Tetrachloroethene
PEL/TLV	Permissible Exposure Limit/ Threshold Limit Value
PID	Photoionization Detector
PPE	Personal Protective Equipment
RWQCB	California Regional Water Quality Control Board, North Coast Region
SGMCP	Soil and Groundwater Management Contingency Plan
SHN	SHN Consulting Engineers & Geologists, Inc.
SPH	Separate Phase Hydrocarbon
SS	Site Supervisor
SSO	Site Safety Officer
SSP	Site Safety Plan
STEL	Short-Term Exposure Limit
TCE	Trichloroethene
TPHD	Total Petroleum Hydrocarbons as Diesel
TPHG	Total Petroleum Hydrocarbons as Gasoline
TPHMO	Total Petroleum Hydrocarbons as Motor Oil
UEL	Upper Explosive Limit
VC	Vinyl Chloride

## 1.0 Introduction

This Soil and Groundwater Management Contingency Plan (SGMCP) has been developed by SHN Consulting Engineers & Geologists, Inc. (SHN) for the Former Tosco/Unocal Bulk Terminal #0201, located at 1200 Railroad Avenue, in Eureka, California (Figure 1). Following site investigation and monitoring activities, it has been determined that areas of soil and groundwater contamination remain in place beneath structures at the site. As a result of the contamination remaining in place at the site, the California Regional Water Quality Control Board, North Coast Region (RWQCB) has requested the submittal of an SGMCP to address the worker safety issues associated with future demolition and site development. This SGMCP contains information regarding the site history, location and levels of contamination present, and the appropriate actions for working in areas with contaminated soil and groundwater.

### 1.1 Purpose

This SGMCP is intended to protect workers with regard to the documented contamination at the site and to outline the necessary actions to be taken in the event that contaminated soil and/or groundwater is encountered during future site activities. This SGMCP includes the appropriate actions to address the characterization, handling, and disposal of contaminated soil and groundwater encountered during future site development activities. The complete set of documents regarding site investigation and remediation activities are accessible for review at the RWQCB office, located in Santa Rosa, California.

### 1.2 Site History

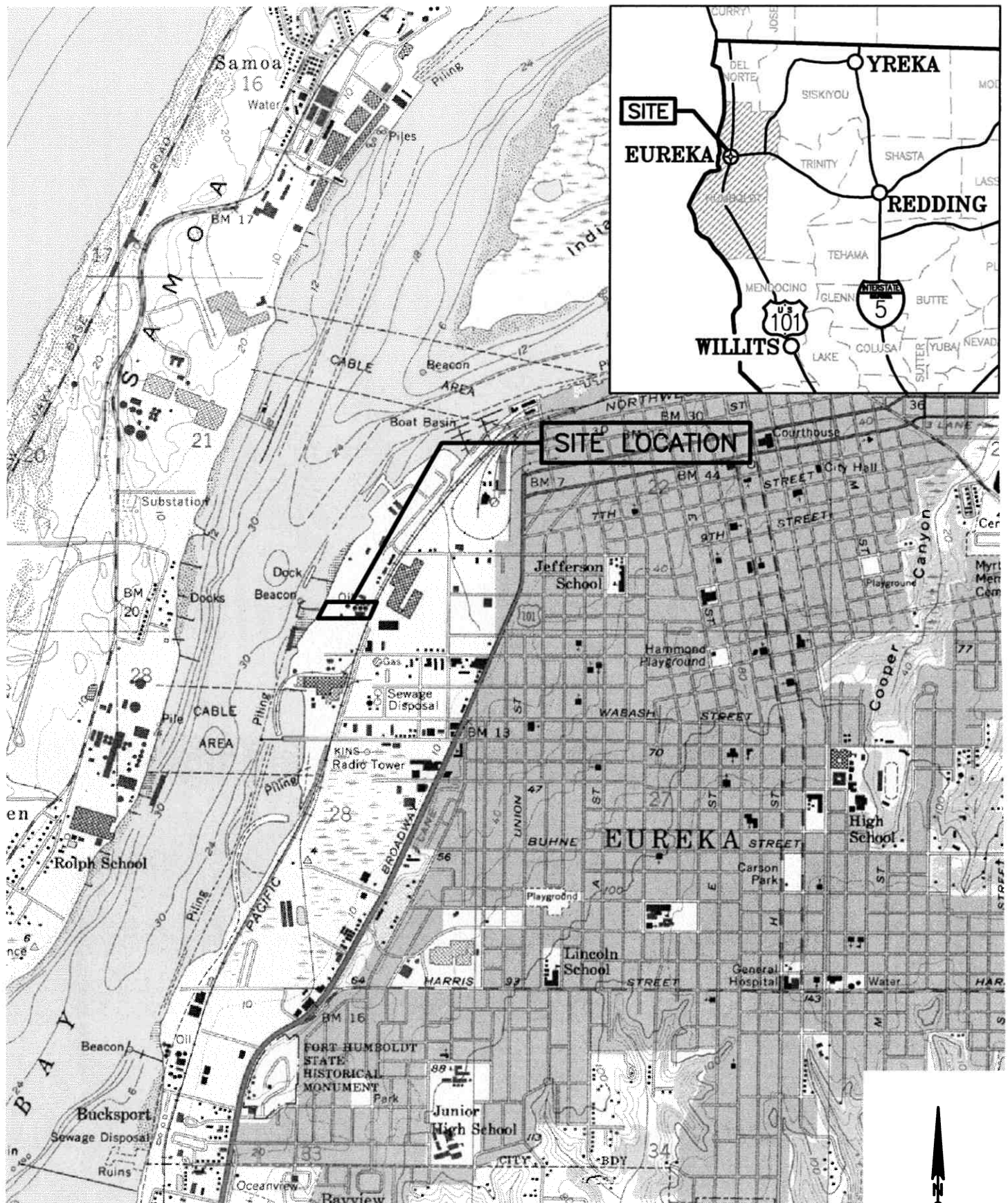
The site consists of a petroleum terminal located on the northern and western portion of the facility, and a petroleum bulk plant located on the southeastern portion of the facility (Figure 2). A Site Plan of the facility in 1963 is presented in the site conceptual model (SHN, February 2000).

The terminal operated as a petroleum transfer and storage facility from the 1930s through February 1996. Petroleum products were received by way of rail and Humboldt Bay, and were transferred through underground piping from the rail spur or wharf to Aboveground Storage Tanks (ASTs) located in the northern portion of the site. There are 8 ASTs that have historically stored diesel fuel, and unleaded and leaded gasoline. These tanks are contained within concrete or earthen containment berms. Existing facilities, including piping, underground utilities, tanks, and other structures were decommissioned and left in place. All ASTs were cleaned and remain in place.

The bulk plant remains in operation and has a concrete containment area in the central portion of the site, where smaller ASTs that hold lubricating oils, red diesel, kerosene, and "waste oil" are located. CBE, LLC is currently leasing the bulk plant to L&M Renner, Inc.

A soil vapor extraction system was operated on the eastern portion of the facility from 1994 through 1997. A sparge system was operated in this area from 1998 through 1999. A bioventing system has been operated in this area since 1999. As an interim remedial action, the Halogenated Volatile Organic Compound (HVOC) source area was removed in 1998 and a sparge system was installed to remove any residual HVOCs. The sparge system has been operating continuously since 1999. CBE, LLC became the new site owner in October 2005.

A detailed description of the site history and remedial action is presented in the Remedial Action Plan for the former Unocal Bulk Terminal #0201 (SHN, July 2000).



**SOURCE: EUREKA  
USGS 7.5 MINUTE  
QUADRANGLE**

**1"=2000'±**



Consulting Engineers  
& Geologists, Inc.

CBE, LLC  
Eureka Bulk Plant #0201  
Eureka, California

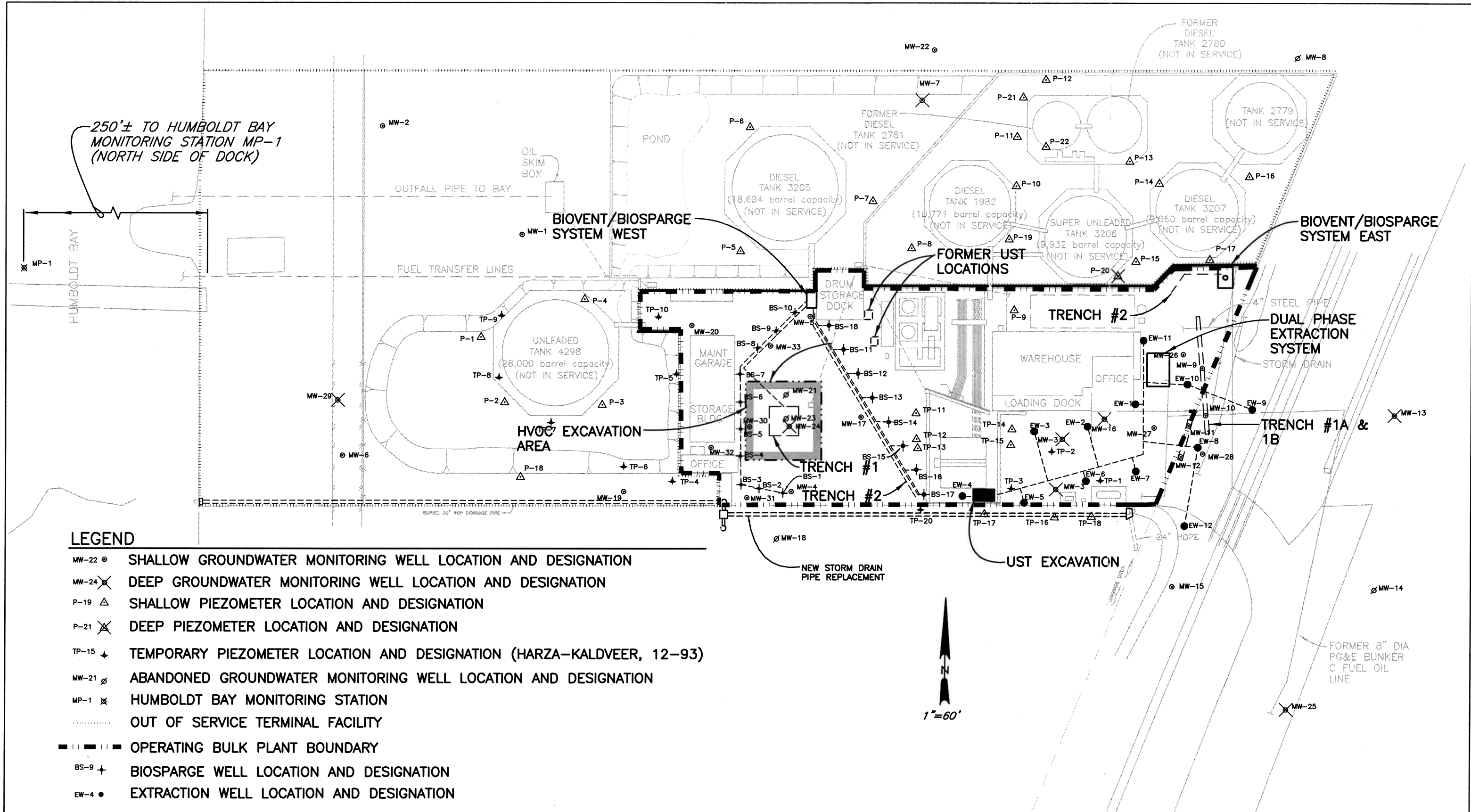
January, 2006

098179.305-LOCATION

Site Location Map

SHN 098179.305

Figure 1



SOURCE:  
FIGURE MODIFIED FROM  
DRAWING PROVIDED BY PEG.

**SH**  
Consulting Engineers  
& Geologists, Inc.

CBE, LLC  
Eureka Bulk Terminal #0201  
Eureka, California

FEBRUARY 2006

098179-306-SITE

Site Plan

SHN 098179.306

Figure 2



## **2.0 Contingency Plan**

This SGMCP is required to minimize the threat of exposure to workers with regard to the documented contamination left in place, and to outline the necessary actions to be taken in the event that contaminated soil and/or groundwater is encountered during site development activities. Additionally, a Site Safety Plan has been included as Appendix A.

### **2.1 Locations of Known Contamination**

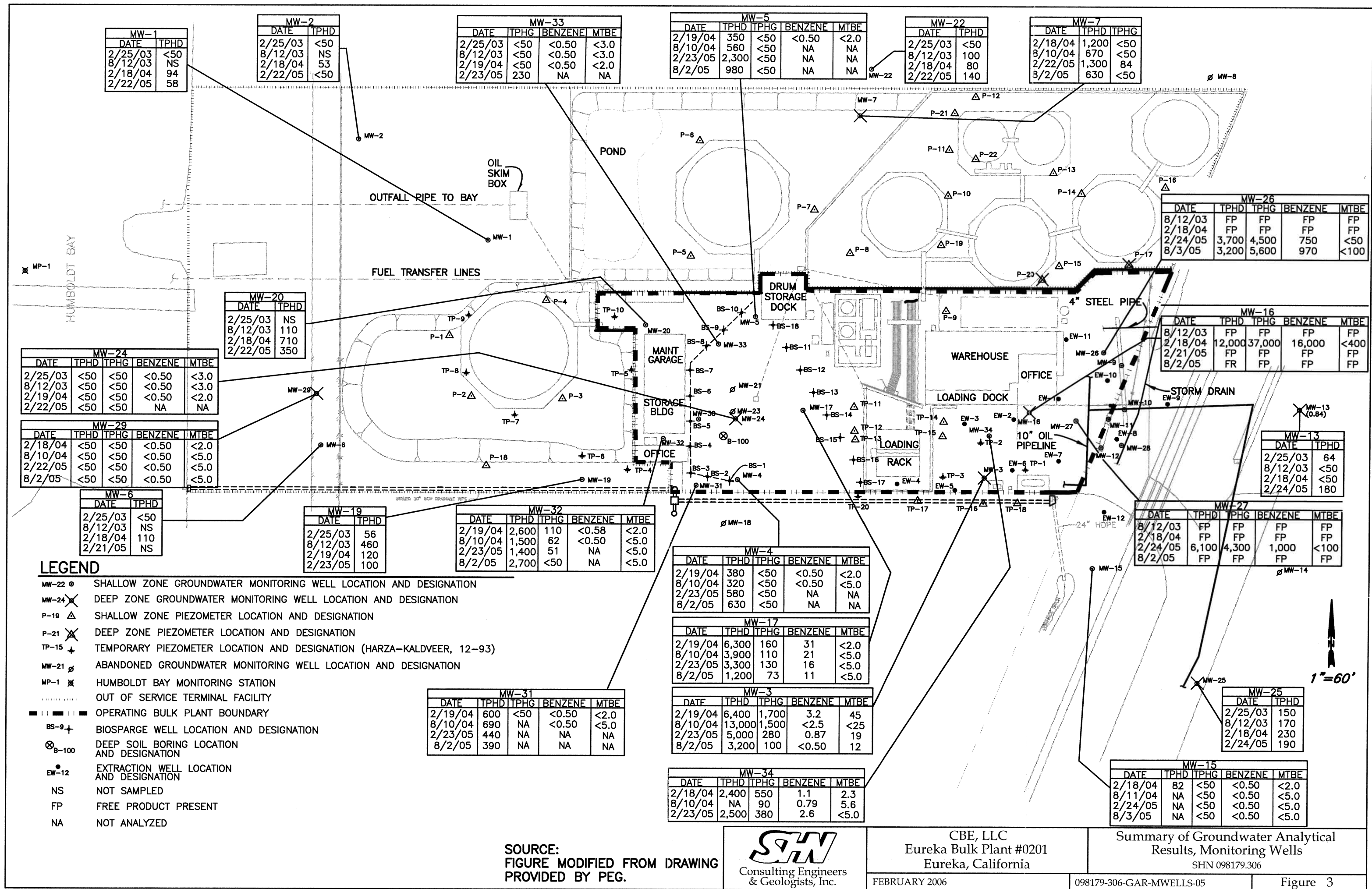
Residual soil and/or groundwater contamination may exist in various areas of the site. Contaminated soil and groundwater are most likely to be encountered underneath and in the vicinity of the existing storage tanks and within the operating bulk plant boundary (Figure 2). The extent of Separate Phase Hydrocarbon (SPH) contamination and the location of groundwater monitoring samples and analytical results are shown in Figures 3 through 6.

### **2.2 Type and Magnitude of Known Contamination**

Contaminants of concern in soil and groundwater at the site consist primarily of Total Petroleum Hydrocarbons as Diesel (TPHD) and Gasoline (TPHG); Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX); Methyl Tertiary-Butyl Ether (MTBE); and Bunker C Fuel Oil. Halogenated Volatile Organic Compounds (HVOCs) as Trichloroethene (TCE), Tetrachloroethene (PCE), Vinyl Chloride (VC), cis 1,2-Dichloroethene, and trans 1,2-Dichloroethene (collectively referred to as DCE) have also been identified in soil and groundwater (SHN, 2005).

#### **2.2.1 Soil**

Approximately 1,190 tons of contaminated soils have been removed from the site. Approximately 950 tons of HVOC contaminated soils were removed in 1998 and approximately 240 tons of contaminated soil were removed in 1999. The areas were excavated in a manner to ensure maximum removal of HVOCs; however, some HVOCs may be present in fringe soils. Analytical results of soil samples collected in October 2002, presented in Table 1, indicate the presence of petroleum hydrocarbons. Soil sampling locations and excavation locations are shown in Figure 2.



SOURCE:  
FIGURE MODIFIED FROM DRAWING  
PROVIDED BY PEG.

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Consulting Engineers  
& Geologists, Inc.

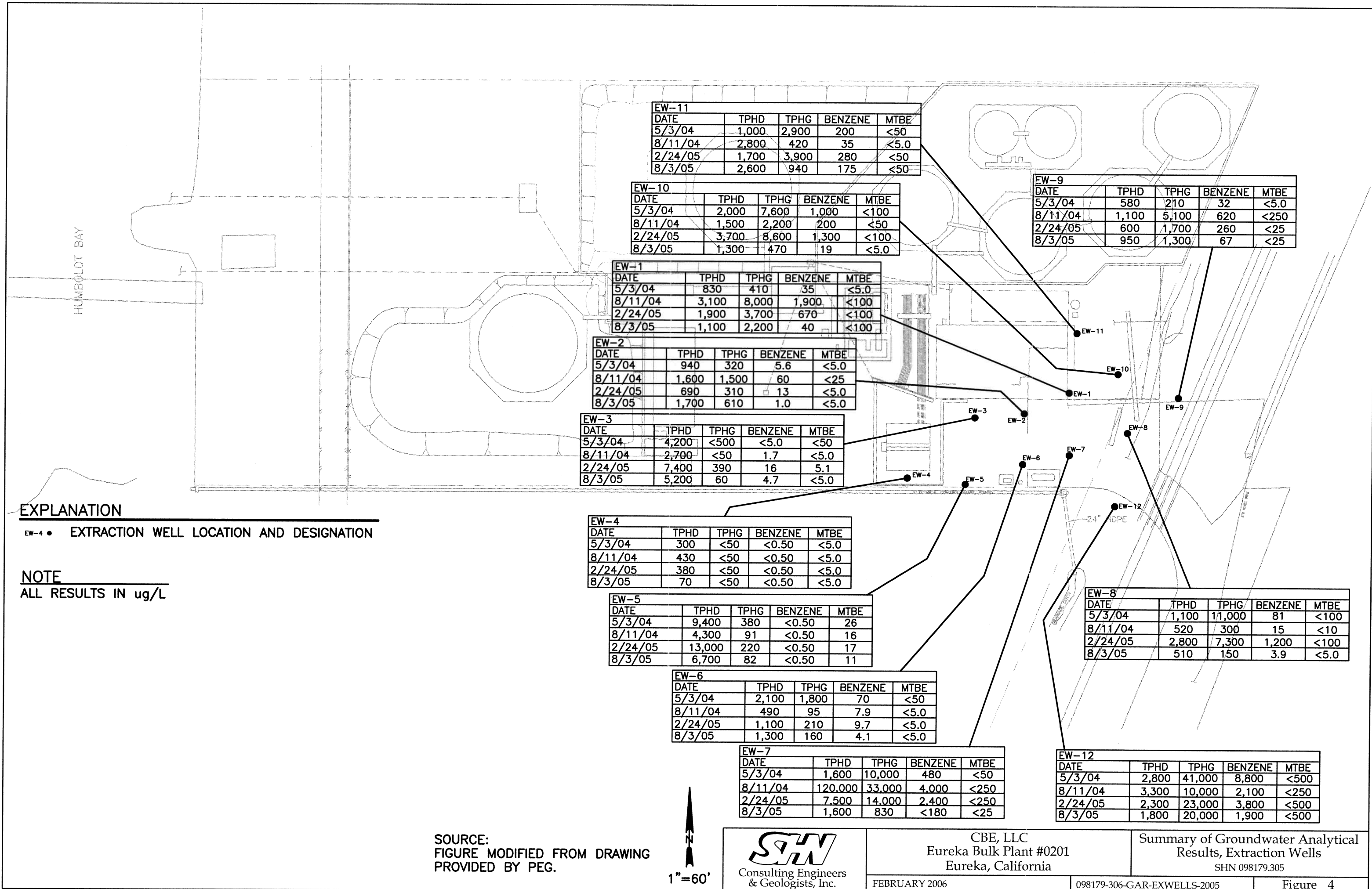
CBE, LLC  
Eureka Bulk Plant #0201  
Eureka, California

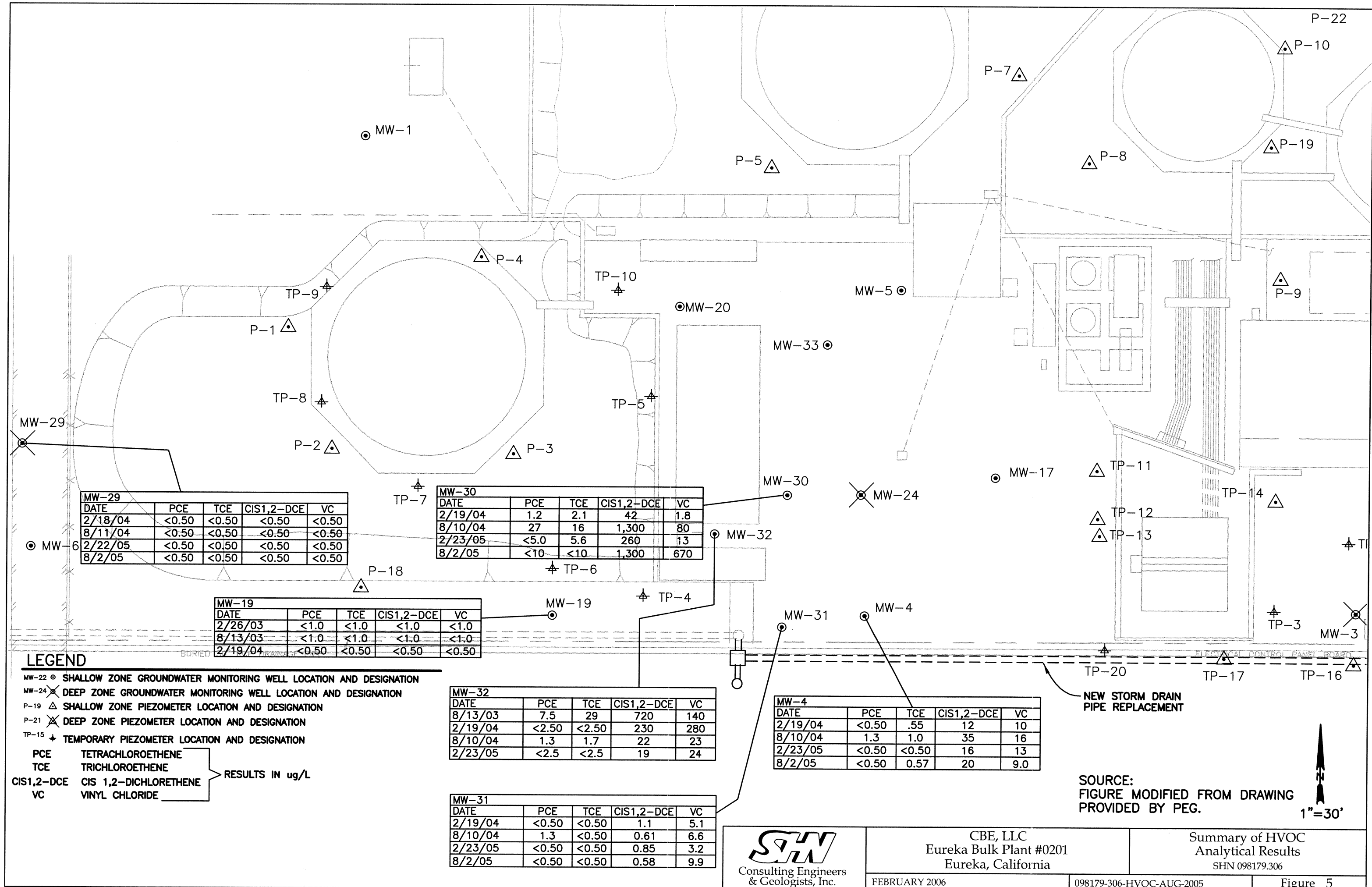
Summary of Groundwater Analytical  
Results, Monitoring Wells  
SHN 098179.306

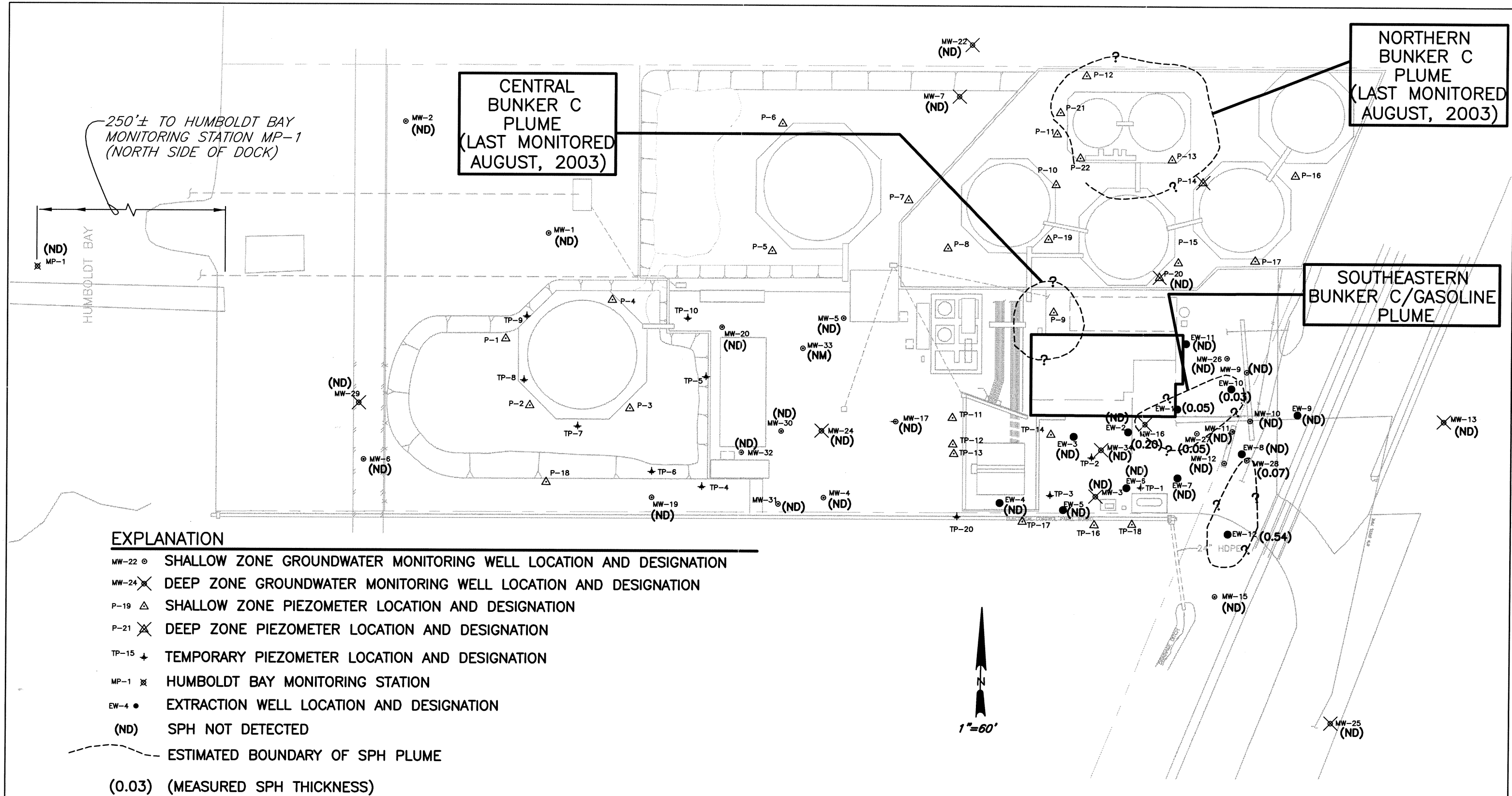
FEBRUARY 2006

098179-306-GAR-MWELLS-05

Figure 3







SOURCE:  
FIGURE MODIFIED FROM DRAWING  
PROVIDED BY PEG.

**Table 1**  
**Soil Analytical Results, October 2002**  
**Former Unocal Bulk Terminal #0201, Eureka, California**  
**(in ug/g)<sup>1</sup>**

Sample Location	TPHMO <sup>2</sup>	TPHD <sup>2</sup>	TPHG <sup>3</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethyl-benzene <sup>4</sup>	Xylene <sup>4</sup>	MTBE <sup>4</sup>
BS-11 @ 7'	<10 <sup>5</sup>	<1.0	1.0	0.017	0.0056	<0.010	0.0054	<0.050
BS-13 @ 7.5'	290	110	110	0.065	<0.50	<0.50	<0.50	<0.50
BS-15 @ 8'	<10	<1.0	5.7	0.056	<0.15	0.055	0.13	<0.10
BS-17 @ 8'	<10	<1.0	8.4	0.045	<0.20	0.083	0.181	<0.10
EW-1 @ 9'	<10	2.4	810	4.5	<3.0	11	11	<1.0
EW-2 @ 10'	810	620	15,000	70	<50	200	220	<70
EW-3 @ 8'	<10	7.4	5.9	0.013	<0.050	0.012	0.016	<0.050
EW-4 @ 8'	620	380	110	<0.050	<0.40	<0.80	<1.2	<0.50
EW-5 @ 8'	170	230	160	<0.050	<0.20	<0.50	<1.0	<0.50
EW-6 @ 8'	370	380	9,100	48	<60	130	<150	<50
EW-7 @ 10.5'	92	130	4,600	28	37	53	192	<50
EW-8 @ 8'	820	720	1,500	4.0	<10	13	13	<25
EW-9 @ 9.5'	<10	5.0	620	6.0	12	6.8	28.6	<10
EW-10 @ 9'	42	48	3,200	3.2	<18	44	60	<25
EW-11 @ 9.5'	12	5.6	120	2.9	<1.2	2.9	4.81	<0.80
MW-34 @ 8'	<10	<1.0	86	0.19	<1.0	1.3	1.93	<0.50
MW-35 @ 9' (EW-12)	11	41	4,100	20	70	50	207	<25

1. ug/g: micrograms per gram
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) analyzed in general accordance with Environmental Protection Agency (EPA) Method 3510.
3. Total Petroleum Hydrocarbons as Gasoline (TPHG) analyzed in general accordance with EPA Method 5035 or 8015M.
4. Benzene (B), Toluene (T), Ethylbenzene (E), Xylenes (X), and Methyl tert-Butyl Ether (MTBE) analyzed in general accordance with EPA Method 8021B or 8260B.
5. <: Denotes a laboratory value less than the method detection limit.

## 2.2.2 Groundwater

Contaminants of concern in groundwater include petroleum hydrocarbons and HVOCs. Groundwater sampling locations are shown in Figure 2. A summary of groundwater monitoring locations and analytical results for petroleum hydrocarbons and HVOCs is presented in Figures 3 through 5. HVOC-contaminated groundwater is confined to the vicinity of monitoring wells MW-4, MW-30, MW-31, and MW-32. The extent of SPH groundwater plumes is shown in Figure 6. Historical groundwater analytical results are included in Appendix B.

## 2.3 Chemical Characteristics and Toxicological Information of Known Contamination

Chemical characteristics and toxicological information of the known contaminants present at the site are discussed in the Site Safety Plan presented in Appendix A.



## **2.4 Notifications to be Performed Before Working in Suspected Contaminated Areas**

Prior to conducting any subsurface work in the site area, the owner of the property will provide the contractor with this document. The contractor's site supervisor will read this document and become familiar with the potential hazards associated with working in potentially contaminated areas of the site. The site supervisor will conduct a site meeting with all personnel who have the potential of coming in contact with contaminated soil and/or groundwater, at which time he/she will instruct them on the appropriate actions to be taken in the event that subsurface contamination is encountered. Each project worker will receive and read a copy of this document and will sign a statement acknowledging receipt and understanding of the document before entering the work site. A copy of this document will be kept with the owner or contractor at the site during construction activities that involve excavation and/or trenching.

## **2.5 Actions to be Taken Before Working in Contaminated Areas**

Prior to working in any subsurface area identified as being impacted by contaminants, workers will review this document and familiarize themselves with the necessary actions to be taken in the event that contamination is encountered. If there are any uncertainties of the actions to be taken, the worker will consult the site supervisor.

## **2.6 Actions to be Taken Upon Encountering Contaminated Material**

Identification or detection of contaminated soil or groundwater may be assessed through visual observation (soil staining, floating product) or odor. If contaminated material is encountered, the site supervisor will be notified. The site supervisor will then determine if the workers have adequate training and proper protective equipment to continue working in the area. Work will not resume until properly trained and equipped workers are present. In accordance with the Site Safety Plan, a hazard analysis must be performed to determine the appropriate level of personnel protection.

## **2.7 How to Properly Handle and Dispose of Contaminated Material**

At a minimum, each worker who may come into contact with contaminated material will use Level D protection at all times. This includes chemical resistant gloves, eye protection, a hardhat, and steel-toed chemical resistant boots.

Any suspected contaminated soil that is encountered and requires removal, such as soil removed during trenching activities, will be moved for temporary stockpiling to a secure area on the site that is away from routine traffic and is high enough that water will not pond on or around the soil. The soil will be placed on and covered with 6-mil plastic (Visqueen®) in such a way that the soil pile is protected from water run-on and run-off. Soil samples will be collected for laboratory analysis from the stockpile using laboratory-supplied containers. The samples will be analyzed for HVOCs, TPHD, TPHG, MTBE, and BTEX. The analytical results of the soil stockpile sample will be used to determine the proper handling and disposal method for the soil. In the event that the soil requires off-site disposal, a contractor licensed to transport such material will be used to transport the contaminated soil to a facility that is licensed to accept such soil. All contaminated soil shall be removed from the site within 90 days, as required.

Contact with groundwater at the site should be minimized at all times. Any suspected contaminated groundwater that is encountered and requires removal will be pumped into containers appropriate for the volume of water to be removed. If only a small volume of water is removed, Department of Transportation-approved steel drums may be appropriate. If a large volume of water needs to be removed, a Baker tank or equivalent may be necessary.

The removed water will be sampled for HVOCs, TPHD, TPHG, MTBE, and BTEX to determine the appropriate disposal method. The analytical results of the groundwater sample will be used to determine the proper handling and disposal method for the water. In the event that the water requires treatment and off-site disposal, a contractor licensed to handle such material will transport it to a facility that is licensed to accept the material for treatment and disposal activities.

## **2.8 Construction Practices to Minimize the Disruption and Potential for Transport of Contaminated Material**

Prior to beginning construction in areas where trenching or other earthwork is to be performed, the site maps (Figures 2 through 6) that delineate areas of contamination will be reviewed. If possible, work scheduled for potential contaminated areas will be relocated to minimize the disturbance or removal of contaminated material. If work in contaminated zones cannot be avoided, work will be conducted in such a manner that minimizes the disturbance and removal of contaminated material. If trenches extend into the shallow groundwater, cement cofferdams will be placed in the trench backfill to minimize the potential for utility trenches to act as a preferential pathway. All contaminated material will be handled in accordance with the guidelines presented in Section 2.7.

## **3.0 References Cited**

SHN Consulting Engineers & Geologists, Inc. (February 2000). Site conceptual model. Eureka: SHN.

---. (July 2000). *Tosco Bulk Terminal #0201, Remedial Action Plan*. Eureka: SHN.

---. (July 2005). *Former Tosco/Unocal Bulk Terminal #0201, First Half 2005 Semiannual Groundwater Monitoring and Remediation Progress Report*. Eureka: SHN.





# Site Safety Plan

Reference: 098179

## General Information

Project:	<u>Former Tosco/Unocal Bulk Terminal #0201</u>	Site Address:	<u>1200 Railroad Avenue</u>
LOP Case No.	<u>1NHU103</u>		<u>Eureka, CA</u>
Site Phone:	<u></u>	Date:	<u>March 2006</u>
Plan Prepared by:	<u>SHN Consulting Engineers &amp; Geologists, Inc.</u>		

## Key Personnel and Responsibilities (to be filled in prior to construction)

	Name	Telephone Number
Project Manager:	<u></u>	<u></u>
Site Supervisor (SS):	<u></u>	<u></u>
Site Safety Officer (SSO):	<u></u>	<u></u>
Field Personnel:	<u></u>	<u></u>

## 1.0 Introduction

This Site Safety Plan (SSP) establishes general health and safety requirements for limiting personal exposure to potentially hazardous materials. The intent of this SSP is to provide health and safety guidelines for the personal protection of contractor or subcontractor employees related to hazardous materials operations at the site. The application of this SSP is limited to the intrusive activities below the ground surface at the subject site. The soils and groundwater are known to contain residual contamination of these materials:

- Petroleum hydrocarbons including: Benzene, Xylene, Ethylbenzene, Toluene, Methyl Tertiary-Butyl Ether (MTBE), Total Petroleum Hydrocarbons as Gasoline (TPHG), Diesel (TPHD), and Bunker C Fuel Oil.
- Halogenated Volatile Organic Compounds (HVOCs) including: Trichloroethene (TCE), Tetrachloroethene (PCE), Vinyl Chloride (VC), cis 1,2-Dichloroethene, and trans 1,2-Dichloroethene (DCE).

This SSP shall be implemented immediately upon detection or suspected presence of any of the above contaminants. All site personnel and visitors must read this SSP prior to entering the contamination reduction zone or exclusion zone.

California Division of Occupational Safety and Health (referred to as Cal/OSHA) requirements involving the operation of heavy equipment and working in or near excavations and trenches will be followed at all times. It is not a focus of this SSP to provide safety guidelines for general construction activities, excavation activities, or heavy equipment operations.

## 2.0 Hazard Analysis

### 2.1 Site/Hazard Overview

Apparent Hazard	Type of Facility	Status of Facility
<input type="checkbox"/> Serious	<input type="checkbox"/> Impoundment	<input checked="" type="checkbox"/> Active (Bulk Plant)
<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Landfill	<input checked="" type="checkbox"/> Inactive (Bulk Terminal)
<input type="checkbox"/> Low	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Unknown
<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other Bulk Plant/ Bulk Terminal	

---

Waste Type(s)	Waste Characteristics	Type/Form of Hazard
<input checked="" type="checkbox"/> Gas	<input checked="" type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Dust
<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Corrosive	<input checked="" type="checkbox"/> Liquid (in GW)
<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Ignitable	<input type="checkbox"/> Fumes
<input checked="" type="checkbox"/> Solid	<input checked="" type="checkbox"/> Volatile	<input checked="" type="checkbox"/> Vapors
<input type="checkbox"/> Unknown	<input type="checkbox"/> Radioactive	<input checked="" type="checkbox"/> Contact
<input type="checkbox"/> Other	<input type="checkbox"/> Reactive	<input checked="" type="checkbox"/> Respiratory
	<input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Particulates
	<input type="checkbox"/> Other	<input type="checkbox"/> IDLH

### 2.2 Chemical Hazards

The chemical hazards at this site include exposure to the chemicals listed in Section 1.0. Table B-1 contains a summary of physical and toxicological data for various substances known at the project site. Table B-2 contains a summary of the exposure routes to humans, and resulting symptoms stemming from petroleum hydrocarbon and related chemical exposures. The published material referenced for these tables represent industry standards and includes current information from the National Institute for Occupational Safety and Health (NIOSH) *Pocket Guide to Chemical Hazards*, and American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values and Biological Exposure Indices," and other sources such as databases from the National Library of Medicine.

Exposure to these chemical hazards can take place in the form of direct contact with the contaminated soils and/or groundwater, or inhalation of air in the vicinity of subsurface activities such as excavation, grading, or digging. The air from disturbed soil may contain dispersed chemicals as vapors, fumes, or mists, and dusts to which the chemicals adhere.

Bunker C Fuel Oil is also known as No. 6 Fuel Oil, Residual Fuel Oil, and Carbon Black Oil, among other names. Bunker C is a complex blend of hydrocarbons derived from various refinery streams, usually residues, and may contain hydrogen sulfide (at less than 1%). Composition varies significantly and includes C20 - C50+ hydrocarbons. The composition is complex and differs with the source of crude oil. Bunker C Fuel Oil contains naphthalene and polynuclear aromatic hydrocarbons including benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene, which are included on Tables B-1 and B-2.

Have all contaminants that may be present on site been identified?

Yes ☒ No ☐ Unknown ☐

Table A-1 Toxicological and Physical Data												
Chemical	PEL/TLV <sup>1</sup> (ppm) <sup>2</sup>	Vapor Pressure (mm Hg) <sup>3</sup>	Boiling Point (°F)	Solubility	Vapor Density (air=1)	Specific Gravity (water=1)	Flash Point (°F)	Melting Point (°F)	Hazard Type (V)	Exposure Route (W)	Acute Effects (X)	Chronic Effects (Y)
Benzene	0.5 (skin) STEL 2.5	75	176	0.18%	2.77	0.88	12 UEL=7.9%	42 LEL=1.3%	b, c, d, g	h, i, k	a, f, h, i, k, l, m, n, s	a, b, c, d, e, f, k
Benzo(a)anthracene (PEL as Coal Tar Pitch Volatiles)	0.2 mg/m <sup>3</sup> (8)	5x10 <sup>-9</sup>	752	0.014%	Not Listed	Not Listed	FP=Not Listed UEL=Not Listed	324 LEL=Not Listed	c, g	i, j	None reported	1
Benzo(a)pyrene	0.2 mg/m <sup>3</sup> (8)	5.5x10 <sup>-9</sup>	592	Insoluble in water	8.7	1.35	FP=Not Listed UEL=Not Listed	354 LEL=Not Listed	c, g	h, i	o	c, f, h, j, k
Bunker C Fuel Oil (No. 6 Fuel Oil)	None Listed	<0.1	400	<0.001%	>10	0.88	140 UEL=0.6%	70 LEL=7%	g	h, i, j	b, c, d, f, i, k, m, n, o, p, q, r,	b, c, d, g, h, j, l
Chrysene (PEL as Coal Tar Pitch Volatiles)	0.2 mg/m <sup>3</sup> (8)	6.3x10 <sup>-7</sup>	838	Insoluble in water	Not Listed	1.27	FP=Not Listed UEL=Not Listed	491 LEL=Not Listed	c, g	i, j	None reported	1
1,2-Dichloroethene (cis and trans isomers)	200	200 (cis) 331 (trans)	140 (cis) 120 (trans)	0.35% (cis) 0.63% (trans)	3.34	1.28 (cis) 1.26 (trans)	39 (cis) 36 (trans) UEL=12.8%	-58 (cis) -112 (trans) LEL=9.7%	b, c, d	h, i, j, k	b, f, h, i, m, o, p, r, s	a, c, f, g
Diesel Fuel (as vapor and aerosol)	100 mg/m <sup>3</sup> (~13 ppm)	<1 <sup>10</sup>	370	<0.1%	>1 <sup>11</sup>	0.87	140 UEL=7%	MP=Not Listed LEL=0.9%	c, d, g	h, i, k	a, b, f, h, i, k, m, r	c, g, h
Ethylbenzene	100 STEL 125	7.1	277	0.02%	3.66	0.87	59 UEL=6.7%	-139 LEL=1.0%	b, c, d	h, i, k	c, i, k, m, n, p	a, c, e, f
Gasoline	300 STEL 500	760	70	0.1%	5	0.74	-36 UEL=7.6%	-36 LEL=1.4%	b, c, d, g	h, i, j, k	f, i, k, n, p	a, b, h, j, l Leukemia
Methyl Tertiary-Butyl Ether (MTBE)	50	250	131	0.05%	>1	0.74	--	-163	b, c, d	h, i, j, k	b, k, m, q, r	h
Naphthalene	10 STEL 15	0.08	424	0.003%	4.42	1.15	315 UEL=5.9%	122 LEL=0.9%	c	h, i, j, k	i, k, e, a, m, r, x, jaundice	a, b, c, e, g, h
Pyrene (PEL as Coal Tar Pitch Volatiles)	0.2 mg/m <sup>3</sup>	8.9x10 <sup>-5</sup>	739	Insoluble in water	6.9	1.28	FP=Not Listed UEL=Not Listed	303 LEL=Not Listed	c	i, j	None reported	None reported
Tetrachloroethene (PCE)	25 STEL 100	18.5	250	1.5%	5.7	1.62	-8 UEL=N/A	-10 LEL=N/A	b, c, d, g	h, i, k	f, h, i, k, n, o, q	a, c, f, g, h, l, m
Toluene	50 (skin) Ceiling 300	22	231	0.05%	3.14	0.87	40 UEL=7.1%	-139 LEL=1.2%	b, c, d	h, i, j, k	e, f, h, i, k, n, r, t, u	c, f

Table A-1

## Toxicological and Physical Data

Chemical	PEL/TLV <sup>1</sup> (ppm) <sup>2</sup>	Vapor Pressure (mm Hg) <sup>3</sup>	Boiling Point (F°)	Solubility	Vapor Density (air=1)	Specific Gravity (water=1)	Flash Point (F°)	Melting Point (F°)	Hazard Type (V)	Exposure Route (W)	Acute Effects (X)	Chronic Effects (Y)
Trichloroethylene (TCE)	50 STEL 100	69	189	0.011%	4.53	1.46	-124 UEL=10.5%	-120 LEL=8%	b, c, d, g	h, i, k	f, i, k, n, o, q Visual disturbance	a, c, g, h, l, m
Vinyl Chloride	1 STEL 75	2,580	7	0.11	2.15	0.91	-108 UEL=33%	-243 LEL=3.6%	b, c, d, e, g	h, i, j	b, h, t	c, g, i, k
Xylene (o-/m-/and p-)	100 STEL 150	7/9/9	285	Insoluble	3.8/3.7/3.7	0.87	63/84/81 UEL=7.0%	-12/-54/56 LEL=1.0%	b, c, d	h, i, j, k	a, e, f, h, i, m, n, q, s	a, b, c, e, g, i, h
<b>(V) Type of Hazard Property</b>												
				a - corrosive b - flammable c - toxic d - volatile	e - reactive f - radioactive g - carcinogenic h - infectious	<b>(W) Route of Exposure</b>						
<b>(X) Acute Effects</b>												
				a - abdominal pain b - central nervous system / depression c - comatose d - convulsions e - confusion f - dizziness	g - diarrhea h - drowsiness i - eye irritation j - fever k - headache m - nausea	n - respiratory system irritation o - skin irritation p - tremors q - unconsciousness r - vomiting s - weakness	t - staggering gait u - dilated pupils v - muscle fatigue w - insomnia x - sweating y - mental impairment					
<b>(Y) Chronic Effects</b>												
				a - central nervous system b - blood c - skin d - bone marrow	e - eyes f - respiratory system g - liver	h - kidneys i - gastrointestinal tract j - fetal defects	k - carcinogen l - suspected carcinogen m - cardio vascular system					
1. PEL/TLV: Permissible Exposure Limit/ Threshold Limit Value 2. ppm: parts per million 3. mm Hg: millimeters of Mercury 4. mg/m <sup>3</sup> : milligrams per cubic meter 5. UEL: Upper Exposure Limit 6. LEL: Lower Exposure Limit  * The lower of the PEL (Permissible Exposure Limit) or TLV (Threshold Limit Value) was selected. The PEL or TLV (apart from the STEL or Ceiling) represents an 8-hour Time-Weighted Average. STEL means Short-Term Exposure Limit and is a 15-minute average occurring no more than four times a day. The Ceiling is not to be exceeded during any part of the day and is considered an instantaneous exposure. The designation (skin) in the PEL/TLV column refers to the potentially significant exposure that can come from contact of the substance with the skin.												

**Table A-2**  
**Exposure Routes and Symptoms**

Substance	Exposure Route	Exposure Symptoms
Benzene	Inhalation* Skin Absorption* Ingestion Skin and/or Eye Contact	<u>Acute Exposure</u> : irritation of eyes, nose, and respiratory system, dizziness, euphoria, giddiness, headache, nausea, staggering gait, weakness, drowsiness, fluid in lungs, pneumonia, gastrointestinal irritation, convulsions, nerve inflammation (polyneuritis), central nervous system depression, and cardiac sensitization. <u>Chronic Exposure</u> : fatigue, nervousness, irritability, blurred vision, and labored breathing, dry and scaly skin, anorexia, leukemia and anemia.
Benzo(a)anthracene	Inhalation* Skin Absorption	<u>Acute Exposure</u> : unknown. Little information available. <u>Chronic Exposure</u> : possible human carcinogen, known animal carcinogen. Little information available. Major constituent of polynuclear aromatic hydrocarbon compounds in the environment.
Benzo(a)pyrene	Inhalation* Skin Contact*	<u>Acute Exposure</u> : skin irritation. <u>Chronic Exposure</u> : nodules on skin, skin lesions, lung cancer, genitourinary cancer, skin cancer.
Bunker C Fuel Oil	Inhalation* Skin Absorption* Ingestion Skin and/or Eye Contact*	<u>Acute Exposure</u> : irritation of eyes, nose, throat, and respiratory system, coughing, choking, shortness of breath, cracking of skin, dizziness, euphoria, contracted eye pupils, headache, nausea, drowsiness, gastrointestinal irritation, convulsions, diarrhea, transient central nervous system depression, loss of reflexes, seizures, blurred vision, and irregular heartbeat. <u>Chronic Exposure</u> : adverse effects in the liver, kidneys, thymus, adrenal glands, bone marrow, testes, and embryo/fetus. Possible human carcinogen.
Chrysene	Inhalation* Skin Absorption	<u>Acute Exposure</u> : unknown. Little information available. <u>Chronic Exposure</u> : possible human carcinogen, known animal carcinogen. Little information available. Large contributor to total polynuclear aromatic hydrocarbon content.
1,2-Dichloroethene (cis and trans isomers)	Inhalation* Ingestion Skin* and/or Eye Contact	<u>Acute Exposure</u> : dizziness, nausea, vomiting, unconsciousness, tremor, irritation of the skin, eye, and mucous membranes, central nervous system depression, intoxication. <u>Chronic Exposure</u> : dermatitis, liver injury.

<p align="center"><b>Table A-2</b> <b>Exposure Routes and Symptoms</b></p>		
<b>Substance</b>	<b>Exposure Route</b>	<b>Exposure Symptoms</b>
Diesel Fuel	Inhalation* Ingestion Skin and/or Eye Contact*	<u>Acute Exposure:</u> headache, slight giddiness, nausea, vomiting, cramping, depression of central nervous system, pulmonary irritation, dermatitis, plugging of skin follicles. <u>Chronic Exposure:</u> delayed kidney and liver damage.
Ethylbenzene	Inhalation* Ingestion Skin and/or Eye Contact	<u>Acute Exposure:</u> irritation of the eyes, nose, throat, and skin, weakness, dizziness, drowsiness, unconsciousness, central nervous system depression. <u>Chronic Exposure:</u> skin rash.
Gasoline	Inhalation* Ingestion Skin and/or Eye Contact	<u>Acute Exposure:</u> intoxication, headaches, blurred vision, dizziness, nausea, incoordination, restlessness, delirium excitement, confusion, disorientation, skin, eye, and mucus membrane irritation, central nervous system depression, pancreatic hemorrhaging, liver difficulties, kidney problems. <u>Chronic Exposure:</u> possible leukemia due to 2+% benzene
Methyl Tertiary-Butyl Ether (MTBE)	Inhalation* Skin Absorption Ingestion	<u>Acute Exposure:</u> nausea, vomiting, vertigo, and sedation, incoordination, nasal congestion, and eye irritation, reversible central nervous system effects. <u>Chronic Exposure:</u> possible kidney failure.
Naphthalene	Inhalation* Skin Absorption* Ingestion Skin and/or Eye Contact	<u>Acute Exposure:</u> eye irritation, skin irritation, headache, confusion, excitement, malaise, profuse sweating, nausea, vomiting, abdominal pain, bladder irritation, painful urination, bloody urine, hemoglobinuria (hemoglobin but not red blood cells in urine), renal tubular blockage, anemia, yellow jaundice. <u>Chronic Exposure:</u> allergic rash, cataracts.
Pyrene	Inhalation* Skin Absorption	<u>Acute Exposure:</u> unknown. Little information available. <u>Chronic Exposure:</u> not classifiable as a carcinogen. Little information available.
Tetrachloroethene (PCE)	Inhalation* Skin Absorption* Ingestion Skin and/or Eye Contact	<u>Acute Exposure:</u> headache, dizziness, nausea, incoordination, unconsciousness, vertigo, disorientation, irritation of the skin, eye, and throat, central nervous system depression, intoxication, liver difficulties (possibly jaundice), kidney problems (possibly dark urine). <u>Chronic Exposure:</u> skin irritation, liver and kidney damage, elevated risk for certain cancers.

<p align="center"><b>Table A-2</b> <b>Exposure Routes and Symptoms</b></p>		
<b>Substance</b>	<b>Exposure Route</b>	<b>Exposure Symptoms</b>
Toluene	Inhalation* Skin Absorption Ingestion Skin and/or Eye Contact	<u>Acute Exposure</u> : irritation of the eyes, respiratory tract, and skin, weakness, dizziness, drowsiness, euphoria unconsciousness, dilated pupils, numbness, lacrimation, photophobia, central nervous system depression. <u>Chronic Exposure</u> : skin cracking, reversible liver and kidney damage.
Trichloroethene (TCE)	Inhalation* Skin Absorption* Ingestion Skin and/or Eye Contact	<u>Acute Exposure</u> : headache, dizziness, nausea, incoordination, unconsciousness, vertigo, insomnia, disorientation, irritation of the skin, eye, and throat, dermatitis, central nervous system depression, intoxication, temporary loss of tactile sense in fingers, liver difficulties, kidney problems, cardiac arrhythmia. <u>Chronic Exposure</u> : skin irritation and dryness, impaired coordination and senses of smell and touch, giddiness, weakness, slowed heartbeat, nervous system, liver and kidney damage, reddening of face, neck, back, and shoulders, double vision, elevated risk for certain cancers.
Vinyl Chloride	Inhalation* Skin Absorption Skin and/or Eye Contact	<u>Acute Exposure</u> : exposures of 1000 times the exposure limit cause slight anesthesia, drowsiness, slight visual disturbances, faltering gait, numbness, and tingling of extremities. No perceptible effects below 1000 ppm. <u>Chronic Exposure</u> : thickening of skin, contact and allergic dermatitis, fatigue, coughing and sneezing, abdominal pain, gastrointestinal bleeding, nausea, vomiting, indigestion, diarrhea, jaundice, weight loss, anorexia, cold tingling sensation of hands and feet, pallor of extremities, liver cancer.
Xylene	Inhalation* Ingestion Skin Absorption Skin and/or Eye Contact	<u>Acute Exposure</u> : irritation of the eyes, nose, and throat, difficulty breathing (delayed), dizziness, staggering, drowsiness, unconsciousness, appetite loss, nausea, vomiting, abdominal pain, reversible kidney and liver damage. <u>Chronic Exposure</u> : skin redness, rash, or blister formation, reversible eye damage from eye exposure.
* Primary exposure route(s)		

### 3.0 Monitoring Plan

On-site air and personnel monitoring shall be conducted, as required by Federal or State health and safety regulations, or if conditions indicate. Monitoring will be conducted and documented by the Site Safety Officer (SSO). On-site air and personnel monitoring shall also be conducted at the start of each new activity, to characterize the type and degree of chemical exposure from each of the



suspected major contaminants for each specific operation, and to determine site control areas according to Table B-3. A Photoionization Detector (PID) with a 10.2 or 10.6 lamp will be used to measure volatile compounds in the air.

<b>Table A-3</b> <b>Occupational Health Monitoring for All Tasks</b>			
<b>Parameter</b>	<b>Location and Interval</b>	<b>Response Level</b>	<b>Response</b>
Hydrocarbons (Total by FID <sup>1</sup> or PID <sup>2</sup> )	Breathing zone of workers subject to highest exposure, every 30 minutes during intrusive work or contaminated soil handling and at every new work location	<2 ppm <sup>3,4</sup> above background reading	Continue Level D/D modified work and continue monitoring
Hydrocarbons (Total by FID or PID)	Breathing zone of workers subject to highest exposure, every 15 minutes during intrusive work or contaminated soil handling and at every new work location	2-4 ppm above background reading [When benzene & vinyl chloride are not detected, 4-20 ppm above background]	Monitor for benzene and vinyl chloride in the breathing zone. Continue work in Level D/D modified unless benzene or vinyl chloride is detected
Hydrocarbons (Total by FID or PID)	Breathing zone of workers subject to highest exposure every 10 minutes during intrusive work or contaminated soil handling and at every new work location	4-10 ppm above background reading [When benzene & vinyl chloride are not detected, 20-40 ppm above background]	Back away from the source and allow the air to clear. If it does not decrease below 4 ppm, contact SSO <sup>5</sup> & upgrade PPE <sup>6</sup> to Level C with organic vapor cartridge [20 ppm when benzene & vinyl chloride are not detected]
Hydrocarbons (Total by FID or PID)	Periodically enter area in Level C to monitor if readings have dropped below 10 ppm above background [40 ppm when benzene and vinyl chloride are not detected]	>10 ppm above background reading [When benzene & vinyl chloride are not detected, >40 ppm above background]	Cease work, exit the project site and contact SSO <sup>7</sup> , SS <sup>8</sup> , and SHN IH <sup>9</sup>
Benzene (Drager 81-01841 Benzene 0.5c or Drager 67-28561 Benzene 0.5a)	When hydrocarbon monitoring is sustained above 4 ppm above background, monitor breathing zone every 30 minutes	No color change noted on benzene tube	Continue Level D/D modified work and discontinue benzene monitoring

<p align="center"><b>Table A-3</b> <b>Occupational Health Monitoring for All Tasks</b></p>			
<b>Parameter</b>	<b>Location and Interval</b>	<b>Response Level</b>	<b>Response</b>
Benzene (Drager 81-01841 Benzene 0.5c or Drager 67-28561 Benzene 0.5a)	When hydrocarbon monitoring is sustained above 4 ppm above background, monitor breathing zone every 30 minutes	Color change noted on benzene tube	Contact SSO & consider potential interferences. If none, upgrade PPE to Level C with organic vapor cartridge
Vinyl Chloride (Drager 81-01721 Vinyl Chloride 0.5b)	When hydrocarbon monitoring is sustained above 4 ppm above background, monitor breathing zone every 30 minutes	No color change noted on vinyl chloride tube	Continue Level D/D modified work and discontinue benzene monitoring
Vinyl Chloride (Drager 81-01721 Vinyl Chloride 0.5b)	When hydrocarbon monitoring is sustained above 4 ppm above background, monitor breathing zone every 30 minutes	Color change noted on vinyl chloride tube	Contact SSO & consider potential interferences. If none, upgrade PPE to Level C with organic vapor cartridge
<p>1. FID: Flame Ionization Detector                      5. SSO: Site Safety Officer  2. PID: Photoionization Detector                    6. PPE: Personal Protective Equipment  3. &lt;: Denotes a value that is "less than" the      7. SS: Site Supervisor  method detection limit.                                      8. IH: Industrial Hygienist  4. ppm: parts per million</p>			

## 4.0 Personal Protective Equipment (PPE)

Level of Protection:    A\_\_\_                      B\_\_\_                      C X                      D Modified X                      D X

### Level C

- Full-face respirator equipped with NIOSH-approved organic vapor cartridges.
- Chemically-resistant steel toe and reinforced shank boots
- Chemically-resistant gloves (thicker nitrile of at least 10 mil)
- Chemical splash goggles (if a half-face respirator is utilized)
- Hard hat with any operating equipment, hazards over shoulder height hazard, or at construction sites
- Safety vests - when there is potential to be in the vicinity of moving equipment

### Level D (Modified) \*[Used when potential exists for contacting subsurface material or groundwater]

- Chemically-resistant steel toe and reinforced shank boots or leather steel toe and reinforced shank boots protected with boot covers
- Chemically-resistant gloves (nitrile of at least 10 mil thick), where work warrants
- Safety glasses (or chemical splash goggles, if warranted)

- Hard hat with any operating equipment, hazards over shoulder height hazard, or at construction sites
- Safety vests - when there is potential to be in the vicinity of moving equipment

**Level D\*\****[Only allowed when no potential exists for contacting subsurface material or groundwater]*

- Leather steel toe and reinforced shank boots
- Leather gloves, where work warrants
- Safety glasses
- Hard hat with any operating equipment, hazards over shoulder height hazard, or at construction sites
- Safety vests - when there is potential to be in the vicinity of moving equipment

**If organic vapor detection with the PID reaches 4 parts per million (ppm) or greater and is sustained at that level or above, respirators and other associated Level C PPE will be donned.** When benzene & vinyl chloride are not detected, 20 ppm may be substituted for 4 ppm in the previous sentence. Respirators will be removed in areas where it is determined to be safe by the SSO.

Respirators will be used, if warranted by site conditions, in order to minimize exposure to volatile organic chemicals by inhalation. Full-face respirators may also be used, to minimize vapor contact with the eyes. A full-face respirator also provides a higher level of respiratory protection than a half-face respirator. Organic vapor/ High-Efficiency Particulate Air (HEPA) (P100) cartridges will be used, and new cartridges will be installed, at a minimum, on a daily basis, or when vapor breakthrough has occurred. To prevent exposure to particulates (dust, mists, or fumes) and to extend the usability of the organic vapor cartridges, HEPA (P100) filters will be used, if warranted by site conditions. All respirators and cartridges will be NIOSH-approved.

Boots, gloves, and protective clothing will be used to prevent direct contact with potential contaminants in the soil and ambient air, and to provide a simple method of personal decontamination after fieldwork has been completed.

Splash goggles or safety glasses will be utilized to provide protection for the eyes, as specified above. All employees and subcontractors will meet the minimum level of PPE when entering or working in an area of known contamination specific to the job task. If the level of contamination is uncertain, the maximum level of PPE will be donned prior to entering the suspected contamination zone. Once appropriate site monitoring has been conducted to determine the level of contamination present, the level of PPE may be reduced, as appropriate. If known or suspected conditions require an increase in PPE level in the contamination zones or newly-designated contamination zones, all field activities will immediately cease until appropriate changes in PPE are made.

## 5.0 Site Control

Whenever feasible, personnel, equipment, and decontamination station placement shall be upwind of any suspected source of contamination. During site activities, the area will be divided into three

basic areas: an exclusion zone (contaminated), a contamination reduction zone, and an uncontaminated zone. The uncontaminated zone will be the area(s) of the project that can be documented as not indicating any detectable levels of contamination by the selected methods of site monitoring presented in this SSP and has no visible or suspected contamination.

No person shall be allowed in an area designated as an exclusion zone or contamination reduction zone unless authorized by the SSO. Any person entering areas other than uncontaminated zones must comply with the PPE provisions of this plan.

If the site control portions of this SSP are not properly followed, the SSO will first consult with the Site Supervisor to correct the issue. If site controls are still unsatisfactory, the SSO will, secondly, stop field activities.

## **6.0 Decontamination Procedures**

### **6.1 Decontamination Areas**

Decontamination areas will be established prior to the commencement of site operations in contamination reduction zones or uncontaminated zones. Decontamination areas may be reestablished in response to changes in environmental conditions and site activities by the SSO.

### **6.2 Equipment Decontamination**

All equipment will be appropriately decontaminated before leaving the work area. All non-disposable PPE will be appropriately decontaminated before leaving the site. Wash rinseate will be placed in a container and properly disposed. Used, disposable PPE will be contained in a separate container. It is anticipated that, for this project, normal disposal will be suitable for disposable PPE. Where soil tests are taken and results indicate site contamination at levels designated as hazardous waste by State or Federal regulations, the disposable clothing will be tested to determine the appropriate method of disposal.

Decontamination of personnel will be accomplished by removing contaminated clothing and gear, washing exposed skin with a solution of deionized water and Liquinox®, and rinsing with deionized water.

### **6.3 Emergency Decontamination**

The decision whether or not to decontaminate a victim is based on the type and severity of the illness or injury and the nature of the contaminant. For some emergency victims, immediate decontamination may be an essential part of life-saving first aid. For others, decontamination may aggravate the injury or delay life-saving treatment. If decontamination does not interfere with essential treatment, it should be performed.

- **If decontamination can be done:**  
Wash, rinse, and/or cut off protective clothing and equipment.
- **If decontamination cannot be done:**  
Wrap the victim in blankets, plastic, or rubber to reduce contamination of other personnel. Alert emergency and off-site medical personnel to potential contamination; instruct them about specific decontamination procedures if necessary. Send along site personnel familiar with the incident.

If immediate medical treatment is required to save a life, decontamination should be delayed until the victim is stabilized. If decontamination can be performed without interfering with essential life-saving techniques or first aid, or if a worker has been contaminated with an extremely toxic or corrosive material that could cause severe injury or loss of life, decontamination must be performed immediately. If an emergency due to a heat-related illness develops, protective clothing should be removed from the victim as soon as possible to reduce the heat stress.

## **7.0 General Safety Requirements**

The following general safety procedures shall be followed by all persons entering and/or working in the immediate area of project activities:

1. All personnel involved with these activities shall be aware of the location of buried utilities. USA Underground Alert shall be notified, if required, at least 48 hours in advance of underground work and will mark and locate any underground utilities located within or immediately adjacent to the work area.
2. No site or subcontractor personnel will be allowed on site without the prior knowledge and consent of the SSO.
3. No field activities will be conducted under unsafe or questionable conditions. For example in higher hazard work situations, two persons, at a minimum must be present at the site while field activities are in progress.
4. All personnel involved with the project shall bring to the attention of the SSO or project representative any unsafe condition or practice associated with site activities.
5. Team members must avoid unnecessary contamination (such as, walking through known or suspected contaminated soil or puddles, kneeling or sitting on the ground, leaning against potentially contaminated equipment).
6. Respiratory devices may not be worn with beards or under other conditions that prevent a proper seal.
7. Respiratory devices may be worn with contact lenses.
8. No deep test pit entry (more than 5 feet in depth) will be allowed without installation of trench shoring, or other approved means of excavation security designed and installed in conformance with current Cal/OSHA and OSHA regulations.
9. Smoking will only be allowed in designated areas.
10. Hard hats will be worn at all times where over-the-shoulder hazards are present.
11. Proper hearing protection will be worn at all times in conformance with current Cal/OSHA regulations.
12. Proper eye protection will be worn to protect the eye area from liquid splashes or flying debris.

## **8.0 Emergency Response Plan**

The SSO shall be immediately notified of any injury or accident occurring at this site. Figure A-1 is a map showing the route from the site to the closest hospital (St. Joseph's).

## 8.1 Emergency Response Contacts

### Medical Facility

Emergency Medical Facilities:

**St. Joseph's Hospital** (open 24 hours every day)  
2700 Dolbeer, Eureka, CA

### Phone #

911  
(707) 445-8121

### Emergency Contacts

Ambulance

Police

Fire Department

California Highway Patrol

Poison Control Hotline

### Phone #

911  
911 or (707) 441-4044  
911 or (707) 441-4044  
911 or (707) 822-5981  
(800) 222-1222 or 876-4766

In the event of an emergency, the following agencies and persons shall be appropriately notified immediately following the necessary emergency response contacts:

## 8.2 Government Contacts

In the event of an unauthorized release of potentially hazardous materials, the following agencies will be notified.

### Contact

California Regional Water Quality, Control Board, North Coast Region

State Office of Emergency Services

Humboldt County Division of Environmental Health

### Phone #

(707) 576-2220  
(800) 852-7550  
(707) 445-6215

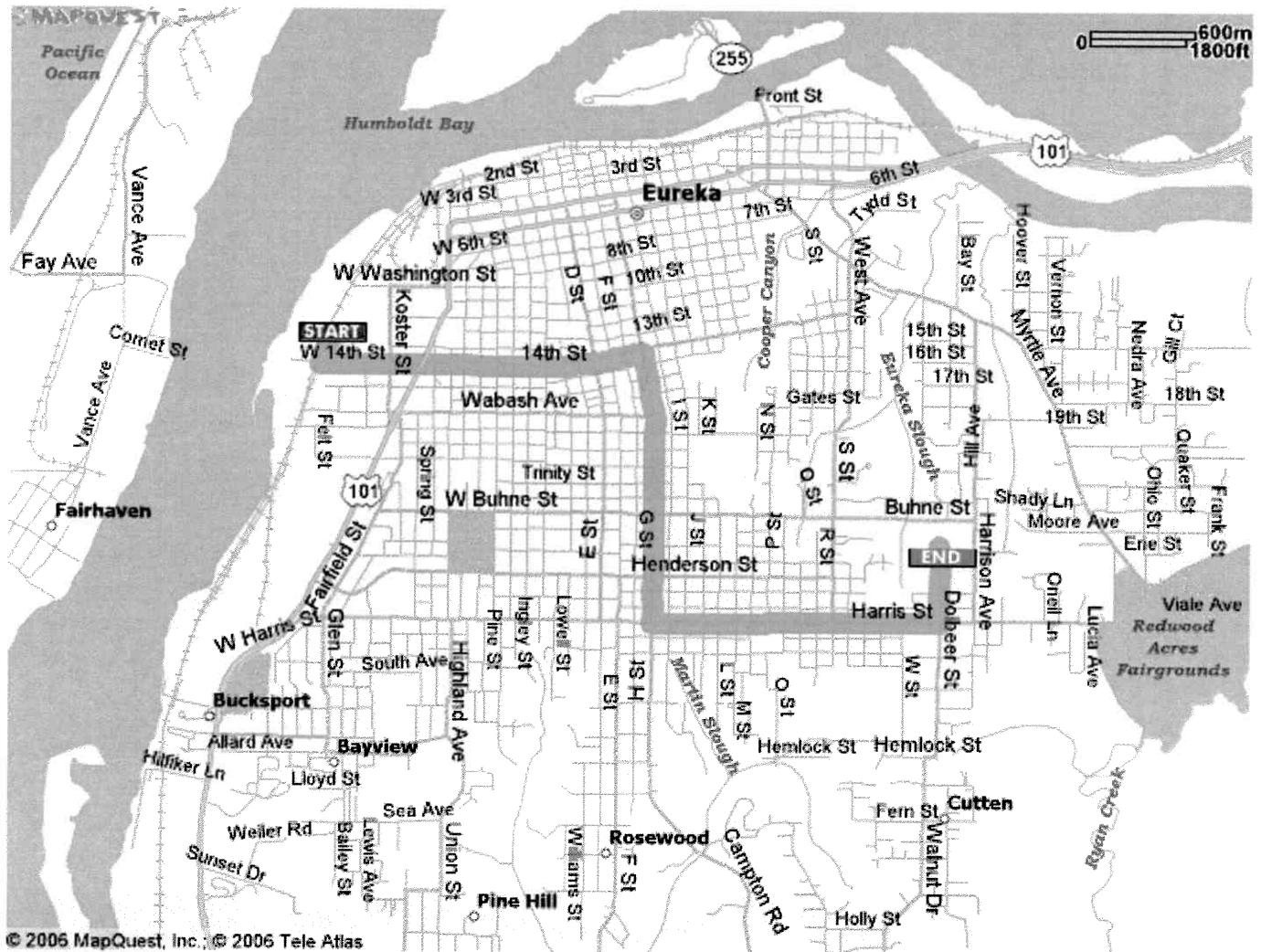
## 8.3 On-Site Documentation

Compliance with the Site Safety Plan will be documented by execution of a sign-off sheet during the site safety briefing(s) and a daily record. By signing these sheets, each person to be involved in the project field activities acknowledges willingness to comply with this SSP throughout the period of the current field activities. Safety meetings will be scheduled at the beginning of field operations, and will be held at the start of each day. Field monitoring results will be recorded and retained on site.

# Hazardous Materials Site Operations Daily Record/ Site Safety Meeting Attendance

[illegible]

## Route from Former Tosco/Unocal Bulk Terminal #0201 to St. Joseph's Hospital



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Summary: 3.4 miles (6 minutes)

Mile	Instruction	For
0.0	Depart from Former Tosco/Unocal Bulk Terminal #0201 (South)-1200 Railroad Avenue	0.1 mi
0.1	Turn LEFT onto west 14th	1.1 mi
1.2	Turn RIGHT onto H Street	1.0 mi
2.2	Turn LEFT onto Harris Street	1.0 mi
3.2	Turn LEFT onto Dolbeer Street	0.2 mi
3.4	Arrive at St. Joseph's – 2700 Dolbeer Street	